

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1-153. Cancelled

154. (Previously Added) The method according to claim 211, wherein said labeling means comprises labeled antigen.
155. (Previously Added) The method according to claim 211, wherein said labeling means comprises a non-immobilized labeled antibody, wherein said non-immobilized labeled antibody binds with said antigen at a binding site distinct from a binding site for either (i) said autoantibody or autoantibodies being screened for or (ii) said immobilized antibody or antibodies, whereby in step (d), antigen is allowed to be bound both to said immobilized antibodies and to said non-immobilized antibody.
156. (Previously Added) The method according to claim 211, further comprising providing a control which provides a positive signal in the presence or absence of the autoantibody or autoantibodies being screened.
157. (Previously Added) The method according to claim 156, wherein the positive control comprises at least one control antibody to the antigen, said control antibody attached to the substrate, wherein said control antibody binds to a site on the antigen distinct from a binding site thereof for the autoantibody or autoantibodies being screened.
158. (Previously Added) The method according to claim 211, wherein said antigen is a thyroid protein.

159. (Previously Added) The method according to claim 211, wherein said antigen is thyroid stimulating hormone receptor.
160. (Previously Added) The method according to claim 211, wherein said antigen is selected from the group consisting of thyroid peroxidase and thyroglobulin.
161. (Previously Added) The method according to claim 211, further comprising screening for the presence of at least one of thyroid stimulating hormone, thyroxine, tri-iodothyronine and thyroglobulin in said sample of body fluid.
162. (Previously Added) The method according to claim 211, wherein said monitoring comprises observing a colorimetric change dependent on said binding of said autoantibody or autoantibodies with said antigen.
163. (Previously Added) The method according to claim 211, wherein said labeling means is colloidal gold.
164. (Previously Added) The method according to claim 211, wherein said substrate comprises a membrane of nitrocellulose, cellulose acetate or a polyamide.
165. (Previously Added) The method according to claim 211, wherein said substrate comprises an application zone provided upstream of said immobilized antibodies on said substrate, and wherein said mixture is allowed to flow from said application zone along said substrate to said immobilized antibodies.
166. (Previously Added) The method according to claim 165, wherein said application zone contains said source of said antigen, and said mixture is obtained by contacting said sample of body fluid with said antigen in said application zone.
167. (Currently Amended) The method according to claim 166, wherein said substrate further comprises at least one non-immobilized antibody to said antigen, wherein

said non-immobilized antibody is provided downstream of said antigen source in said application zone.

168. (Currently Amendment) A method of screening a sample of body fluid for first and /or second autoantibodies to at least one antigen, which method comprises:
- (a) providing a first antibody to said antigen, wherein said first antibody is immobilized on a substrate and binds a first binding site of said antigen;
 - (b) providing a second antibody to said antigen, wherein said second antibody is ~~labeled to permit monitoring of binding of said autoantibodies and said antigen, and is non-immobilized so that said second antibody can flow along said~~ substrate;
 - (i) labeled to allow detection of autoantibodies when present in said sample,
 - (ii) binds a second binding site of said antigen and
 - (iii) is non-immobilized so that said second antibody flows along said substrate according to step (e);
 - (c) providing a source of said at least one antigen, said antigen comprising a first binding site to which either the first autoantibody or the immobilized antibody binds and a second binding site to which either the second autoantibody or the non-immobilized antibody binds;
 - (d) contacting said antigen of step (c), said sample of body fluid and simultaneously or successively said non-immobilized antibody, so as to obtain a mixture wherein said antigen binds with said first and / or second autoantibodies present in said sample of body fluid, and / or said non-immobilized antibody;
 - (e) allowing said mixture obtained in step (d) to flow along said substrate of step (a) to said immobilized antibody; and
 - (f) monitoring said binding of said antigen with either said first and / or second autoantibodies, or said immobilized or non-immobilized antibodies, so as to provide an indication of the presence of said autoantibodies in said sample of body fluid;

wherein said first and / or second autoantibodies, when present in said sample being screened, respectively bind with said first and /-or second binding sites of said antigen in step (d) respectively so that subsequent respective binding of said immobilized and / or non-immobilized antibodies with said first and /-or second binding sites of said antigen respectively is inhibited where the first and /-or second autoantibodies have previously bound with said first and /-or second binding sites of said antigen in step (d) is substantially inhibited.

169. Cancelled

170. (Previously Added) The method according to claim 168, further comprising providing a control which provides a positive signal in the presence or absence of the autoantibody or autoantibodies being screened.

171. (Previously Added) The method according to claim 170, wherein said positive control comprises attaching to the substrate at least one control agent that binds to the at least one non-immobilized antibody.

172. (Previously Added) The method according to claim 168, wherein said antigen is a thyroid protein.

173. (Previously Added) The method according to claim 168, wherein said antigen is thyroid stimulating hormone receptor.

174. (Previously Added) The method according to claim 168, wherein said antigen is selected from the group consisting of thyroid peroxidase and thyroglobulin.

175. (Previously Added) The method according to claim 168, further comprising screening for the presence of at least one of thyroid stimulating hormone, thyroxine, tri-iodothyronine and thyroglobulin in said sample of body fluid.

176. (Previously Added) The method according to claim 168, wherein said monitoring comprises observing a colorimetric change dependent on said binding of said autoantibody or autoantibodies with said antigen.
177. (Previously Added) The method according to claim 168, wherein said labeling means is colloidal gold.
178. (Previously Added) The method according to claim 168, wherein said substrate comprises a membrane of nitrocellulose, cellulose acetate or a polyamide.
179. (Previously Added) The method according to claim 168, wherein said substrate comprises an application zone provided upstream of said immobilized antibody on said substrate, and wherein said mixture is allowed to flow from said application zone along said substrate to said immobilized antibody.
180. (Previously Added) The method according to claim 179, wherein said application zone contains said source of said antigen, and said mixture is obtained by contacting said sample of body fluid with said antigen in said application zone.
181. (Previously Added) The method according to claim 180, wherein said substrate further comprises the non-immobilized second antibody to said antigen, wherein said non-immobilized second antibody is provided downstream of said antigen source in said application zone.
182. Cancelled
183. Cancelled
184. (Currently Amended) A kit for screening a sample of body fluid for distinct populations of at least first and second autoantibodies which respectively bind first and second distinct binding sites of at least one antigen, which kit comprises:

- (a) at least first and second antibodies to said antigen, wherein said first and second antibodies are immobilized on a substrate and respectively bind first and second distinct binding sites of said antigen;
- (b) a source of said at least one antigen, the antigen comprising a first binding site to which either said first autoantibody or said first immobilized antibody binds, and a second binding site to which either said second autoantibody or said second immobilized antibody binds;
- (c) means for contacting said antigen source with said sample of body fluid, so as to obtain a mixture wherein said antigen binds with said first and / or second autoantibodies present in said sample of body fluid;
- (d) means for allowing said mixture to flow along said substrate to said antibodies immobilized on said substrate;
- (e) detection means including labeling means so as to enable the presence of said autoantibodies in said sample of body fluid to be detected;

wherein said first and / or second autoantibodies when present in said sample being screened respectively bind with said first and second binding sites of said antigen when a mixture is obtained as specified in paragraph (c), whereby subsequent respective binding of said first and / or second immobilized antibodies with said first and second binding sites of said antigen is inhibited, and further characterised in that said first and second immobilized antibodies are provided at discrete first and second positions on said substrate to enable detection and identification of said distinct populations of first and / or second autoantibodies when present in said sample of body fluid, and wherein: for said distinct population of first autoantibodies: (i) in the absence of said autoantibodies, said detection means are present and detectable at said discrete first position on said substrate; and (ii) in the presence of said autoantibodies, said detection means are present at said discrete first position on said substrate at a reduced level compared to (i); and for said distinct population of second autoantibodies: (iii) in the absence of said autoantibodies, said detection means are present and detectable at said discrete second position on said substrate; and (iv) in the presence of said autoantibodies,

said detection means are present at said discrete second position on said substrate at a reduced level compared to (iii).

185. (Previously Added) The kit according to claim 184, wherein said labeling means comprises labeled antigen.
186. (Previously Added) The kit according to claim 184, wherein said labeling means comprises a non-immobilized labeled antibody, which non-immobilized labeled antibody binds with a site on said antigen distinct from a binding site for either (i) said autoantibodies being screened or (ii) said immobilized antibodies, whereby antigen is allowed to be bound both to said immobilized antibodies and to said non-immobilized labeled antibody.
187. (Previously Added) The kit according to claim 184, further comprising a control which provides a positive signal in the presence or absence of the autoantibodies being screened.
188. (Previously Added) The kit according to claim 187, wherein the control comprises at least one control antibody to the antigen attached to the substrate, wherein the control antibody binds to a site on the antigen distinct from a binding site thereof for the autoantibodies being screened.
189. (Previously Added) The kit according to claim 184, wherein said antigen is a thyroid protein.
190. (Previously Added) The kit according to claim 184, wherein said antigen is thyroid stimulating hormone receptor.
191. (Previously Added) The kit according to claim 184, wherein said antigen is selected from the group consisting of thyroid peroxidase and thyroglobulin.

192. (Previously Added) The kit according to claim 184, further comprising means for screening for the presence of at least one of thyroid stimulating hormone, thyroxine, tri-iodothyronine and thyroglobulin in said sample of body fluid.
193. (Previously Added) The kit according to claim 184, wherein said labeling means is colloidal gold.
194. (Previously Added) The kit according to claim 184, wherein said substrate comprises a membrane of nitrocellulose, cellulose acetate or a polyamide.
195. (Previously Added) The kit according to claim 184, wherein said substrate comprises an application zone provided upstream of said immobilized ~~antibody~~ antibodies on said substrate.
196. (Previously Added) The kit according to claim 195, wherein said application zone contains said source of said antigen.
197. (Previously Added) The kit according to claim 196, wherein said substrate further comprises at least one non-immobilized antibody to said antigen, wherein said non-immobilized antibody is provided downstream of said antigen source in said application zone.
198. (Currently Amended) A kit for screening a sample of body fluid for first and second autoantibodies to at least one antigen, which kit comprises:
- (a) a first antibody to said antigen, wherein said first antibody is immobilized on a substrate and binds a first binding site of said antigen;
 - (b) a second antibody to said antigen, wherein said second antibody is labeled to allow detection of autoantibodies when present in said sample, binds a second binding site of said antigen, and is non-immobilized so that said second antibody can flow along said substrate when present in a mixture as specified in paragraph (d);

- (c) a source of said at least one antigen, said antigen comprising a first binding site to which either the first autoantibody or the immobilized antibody binds and a second binding site to which either the second autoantibody or the non-immobilized antibody binds;
- (d) means for contacting said antigen source, said sample of body fluid and simultaneously or successively said non-immobilized antibody, so as to obtain a mixture wherein said antigen binds with said first and / or second autoantibodies present in said sample of body fluid, and / or said non-immobilized antibody; and
- (e) means for allowing said mixture to flow along said substrate of step (a) to said immobilized antibody;

wherein said first and / or second autoantibodies, when present in said sample being screened respectively bind with said first and second binding sites of said antigen when a mixture is obtained as specified in paragraph (d), whereby respective binding of said immobilized and / or non-immobilized antibodies with said first and second binding sites of said antigen is inhibited, and characterised in that said immobilized antibody is provided at a discrete detection position on said substrate and wherein (i) in the absence of said first and second autoantibodies, detection means as provided by said non-immobilized labeled antibody are present and detectable at said discrete detection position on said substrate; and (ii) in the presence of said first and / or second autoantibodies, said detection means as provided by said non-immobilized labeled antibody are present at said discrete detection position on said substrate at a reduced level compared to (i).

199. (Cancelled)

200. (Previously Added) The kit according to claim 198, further comprising a control which provides a positive signal in the presence or absence of the autoantibody or autoantibodies being screened.

201. (Previously Added) The kit according to claim 200, wherein the positive control comprises at least one control agent attached to the substrate and binds to the at least one non-immobilized antibody.
202. (Previously Added) The kit according to claim 198, wherein said antigen is a thyroid protein.
203. (Previously Added) The kit according to claim 198, wherein said antigen is thyroid stimulating hormone receptor.
204. (Previously Added) The kit according to claim 198, wherein said antigen is selected from the group consisting of thyroid peroxidase and thyroglobulin.
205. (Previously Added) The kit according to claim 198, further comprising means for screening for the presence of at least one of thyroid stimulating hormone, thyroxine, tri-iodothyronine and thyroglobulin in said sample of body fluid.
206. (Previously Added) The kit according to claim 198, wherein said labeling means is colloidal gold.
207. (Previously Added) The kit according to claim 198, wherein said substrate comprises a membrane of nitrocellulose, cellulose acetate or a polyamide.
208. (Previously Added) The kit according to claim 198, wherein said substrate comprises an application zone provided upstream of said immobilized antibody on said substrate.
209. (Previously Added) The kit according to claim 208, wherein said application zone comprises said source of said antigen.

210. (Previously Added) The kit according to claim 209, wherein said substrate further comprises the non-immobilized second antibody to said antigen, wherein said non-immobilized second antibody is provided downstream of said antigen source in said application zone.
211. (Currently Amended) A method of screening a sample of body fluid for at least ~~first and/or second autoantibodies to~~ distinct populations of at least first and second autoantibodies which respectively bind first and second distinct binding sites of at least one antigen, which method comprises:
- (a) providing at least first and/or second antibodies to said antigen, wherein said first and/or second antibodies are immobilized on a substrate and respectively bind first and second distinct binding sites, respectively, on of said antigen;
 - (b) providing a source of said at least one antigen, ~~wherein said the antigen comprises at least~~ comprising a first and second distinct binding sites, wherein said first binding site binds to which either said first autoantibody or said first immobilized antibody binds, and said a second binding site binds to which either said second autoantibody or said second immobilized antibody binds;
 - (c) contacting said antigen of step (b) with said sample of body fluid, so as to obtain a mixture wherein said antigen binds with said first and / or second autoantibodies present in said sample of body fluid;
 - (d) allowing said mixture obtained in step (c) to flow along said substrate of step (a) to said first and/or second antibodies immobilized on said substrate;
 - (e) providing labeling means so as to ~~permit monitoring of binding of said autoantibodies and said antigen~~ enable the presence of said autoantibodies in said sample of body fluid to be detected; and
 - (f) monitoring said binding of said antigen with either said first and / or second autoantibodies, or said immobilized antibodies, so as to provide an indication of the presence of said autoantibodies in said sample of body fluid;
- wherein said first and / or second autoantibodies, when present in said sample being screened respectively bind with said antigen in step (e) so that in step (d) binding of said first and/or second immobilized antibodies to said first and second binding sites on said

~~antigen is inhibited where the first and second autoantibodies have bound with the first and second binding sites of said antigen in step (e)~~first and second binding sites of said antigen when a mixture is obtained in step (c), whereby subsequent respective binding of said first and / or second immobilized antibodies with said first and second binding sites of said antigen in step (d) is substantially inhibited, and further characterised in that said first and second immobilized antibodies are provided at discrete first and second positions on said substrate, so that monitoring of binding of both said first and second immobilized antibodies with said antigen at said discrete first and second positions thereby enables detection and identification of said distinct populations of first and / or second autoantibodies when present in said sample of body fluid.

212. (Currently Amended) A method of screening a sample of body fluid for at least ~~first and/or second autoantibodies respectively binding~~ distinct populations of at least first and second autoantibodies which respectively bind at least first and second distinct antigens, which method comprises:
- (a) providing at least first and ~~or~~ second antibodies to said at least first and second distinct antigens, wherein said first and ~~or~~ second antibodies are immobilized on a substrate;
 - (b) providing one or more sources of said at least first and second distinct antigens, wherein said first antigen comprises a binding site to which either said first autoantibody or said first immobilized antibody binds, and said second antigen comprises a binding site to which either said second autoantibody or said second immobilized antibody binds;
 - (c) contacting said at least first and second antigens of step (b) with said sample of body fluid, so as to obtain a mixture wherein said first and second antigens respectively bind with said first and / or second autoantibodies when present in said sample of body fluid;
 - (d) allowing said mixture obtained in step (c) to flow along said substrate of step (a) to said first and ~~or~~ second antibodies immobilized to said substrate;

- (e) providing labeling means so as to ~~permit monitoring of said binding of said autoantibodies and said antigens~~ enable the presence of said autoantibodies in said sample of body fluid to be detected; and
- (f) monitoring said binding of said first and second antigens with either said first and / or second autoantibodies, or said immobilized antibodies, so as to provide an indication of the presence of said autoantibodies in said sample of body fluid;

wherein said first and / or second autoantibodies when present in said sample being screened bind with said first and second antigens when a mixture is obtained in step (c), respectively so that whereby subsequent respective binding of said first and / or second immobilized antibodies with said first and second antigens in step (d) binding of said first and second immobilized antibodies with said first and second antigens respectively is inhibited where the first and second autoantibodies have bound with the first and second antigens in step (e) is substantially inhibited and further characterised in that said first and second immobilized antibodies are provided at discrete first and second positions on said substrate, so that monitoring of respective binding of both said first and second immobilized antibodies with said first and second antigens at said discrete first and second positions thereby enables detection and identification of said distinct populations of first and / or second autoantibodies when present in said sample of body fluid.

213. (Cancelled)

214. (Cancelled)

215. (New) A kit for screening a sample of body fluid for distinct populations of at least first and second autoantibodies which respectively bind at least first and second distinct antigens, which kit comprises:

- (a) at least first and second antibodies to said at least first and second distinct antigens, wherein said first and second antibodies are immobilized on a substrate;

- (b) one or more sources of said at least first and second distinct antigens, wherein said first antigen comprises a binding site to which either said first autoantibody or said first immobilized antibody binds, and said second antigen comprises a binding site to which either said second autoantibody or said second immobilized antibody binds;
- (c) means for contacting said at least first and second antigens with said sample of body fluid, so as to obtain a mixture wherein said first and second antigens respectively bind with said first and / or second autoantibodies when present in said sample of body fluid;
- (d) means for allowing said mixture to flow along said substrate to said first and second antibodies immobilized on said substrate; and
- (e) detection means including labeling means so as to enable the presence of said autoantibodies in said sample of body fluid to be detected;

wherein said first and / or second autoantibodies when present in said sample being screened respectively bind with said first and second antigens when a mixture is obtained as specified in paragraph (c), whereby subsequent respective binding of said first and / or second immobilized antibodies with said first and second antigens is inhibited, and further characterised in that said first and second immobilized antibodies are provided at discrete first and second positions on said substrate to enable detection and identification of said distinct populations of first and / or second autoantibodies when present in said sample of body fluid, and wherein for said distinct population of first autoantibodies: (i) in the absence of said autoantibodies, said detection means are present and detectable at said discrete first position on said substrate; and (ii) in the presence of said autoantibodies, said detection means are present at said discrete first position on said substrate at a reduced level compared to (i); and for said distinct population of second autoantibodies: (iii) in the absence of said autoantibodies, said detection means are present and detectable at said discrete second position on said substrate; and (iv) in the presence of said autoantibodies, said detection means are present at said discrete second position on said substrate at a reduced level compared to (iii).

216. (New) A kit for screening a sample of body fluid for first and second autoantibodies to at least one antigen, which kit comprises:

- (a) a first antibody to said antigen, wherein said first antibody is immobilized on a substrate and binds a first binding site of said antigen;
- (b) a second antibody to said antigen, wherein said second antibody is labeled to allow detection of autoantibodies when present in said sample, binds a second binding site of said antigen, and is provided on said substrate upstream of at least said immobilized antibody and is non-immobilized to said substrate so that said second antibody can flow along said substrate when present in a mixture as specified in paragraph (e);
- (c) a source of said at least one antigen provided on said substrate upstream of said immobilized and non-immobilized antibodies, said antigen comprising a first binding site to which either the first autoantibody or the immobilized antibody binds and a second binding site to which either the second autoantibody or the non-immobilized antibody binds;
- (d) means for application of said sample of body fluid to said substrate so as to form an initial mixture comprising at least said antigen and said first and / or second autoantibodies when present in said sample of body fluid;
- (e) means for allowing said initial mixture of (d) to flow along said substrate to said non-immobilized antibody provided on said substrate so as to form a further mixture comprising said antigen, said first and / or second autoantibodies when present and said non-immobilized antibody, which further mixture flows along said substrate to said non-immobilized antibody;

wherein said first and / or second autoantibodies, when present in said sample being screened respectively bind with said first and second binding sites of said antigen when present in an initial mixture as defined above in paragraph (d), whereby respective subsequent binding of said immobilized and / or non-immobilized antibodies with said first and second binding sites of said antigen is inhibited, and characterised in that said immobilized antibody is provided at a discrete detection position on said substrate and wherein (i) in the absence of said first and second autoantibodies, detection means as

provided by said non-immobilized labeled antibody are present and detectable at said discrete detection position on said substrate; and (ii) in the presence of said first and / or second autoantibodies, said detection means as provided by said non-immobilized labeled antibody are present at said discrete detection position on said substrate at a reduced level compared to (i).